

Applicants : Nancy Carrasco, Ge Dai and Orlie Levy
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Amendments to the Claims:

Please amend claims 56 and 63 and add new claims 76-86 as set forth below.

1-55. (Canceled)

56. (Currently Amended) A method of determining whether a mammalian sodium/iodide symporter is expressed in a mammalian tissue, the method comprising contacting nucleic acid from the mammalian tissue with a nucleic acid probe ~~which can hybridize to a portion of the nucleotide sequence set forth in SEQ ID NO:1~~, wherein detecting hybridization of the nucleic acid probe to the nucleotide sequence indicates that the mammalian sodium/iodide symporter is expressed in the mammalian tissue, and wherein the nucleic acid probe comprises nucleotides set forth in SEQ ID NO:1 or wherein the nucleic acid probe detects nucleotides set forth in SEQ ID NO:1.

57. (Previously presented) The method of claim 56, wherein the nucleic acid from the mammalian tissue is mRNA.

58. (Previously presented) The method of claim 56, wherein the nucleic acid from the mammalian tissue is mRNA made into cDNA.

59. (Previously presented) The method of claim 56, wherein the mammalian tissue is non-thyroid tissue.

60. (Previously presented) The method of claim 56, wherein the nucleic acid probe further comprises a label.

61. (Previously presented) The method of claim 60, wherein the label is selected

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from the group consisting of a radioactive label, biotin, and a fluorescent probe.

62. (Previously presented) The method of claim 56, wherein the tissue is a human tissue.

63. (Currently Amended) A method for determining whether a mammalian sodium/iodide symporter is present in a sample, the method comprising contacting the sample with an antibody that is immunoreactive with the mammalian sodium/iodide symporter, wherein detecting binding of the antibody to the mammalian sodium/iodide symporter indicates that the mammalian sodium/iodide symporter is present in the sample, and wherein the antibody is immunoreactive with a protein having the amino acid sequence set forth in SEQ ID NO:2 and/or with a protein comprising twelve transmembrane domains and amino acid residues Asp 16, Glu 79 and Arg 208.

64. (Previously presented) The method of claim 63, wherein the antibody is a polyclonal antibody.

65. (Previously presented) The method of claim 63, wherein the antibody is a monoclonal antibody.

66. (Previously presented) The method of claim 63, wherein the antibody is labeled.

67. (Previously presented) The method of claim 63, wherein the sample is a mammalian tissue.

68. (Previously presented) The method of claim 67, wherein the mammalian

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tissue is thyroid tissue.

69. (Previously presented) The method of claim 67, wherein the mammalian tissue is non-thyroid tissue.

70. (Previously presented) The method of claim 67, wherein the mammalian tissue is human tissue.

71-75. (Canceled)

76. (New) The method of claim 56, wherein the nucleic acid probe comprises nucleotides set forth in SEQ ID NO:1.

77. (New) The method of claim 56, wherein the nucleic acid probe detects nucleotides set forth in SEQ ID NO:1.

78. (New) The method of claim 63, wherein the antibody is immunoreactive with a protein having the amino acid sequence set forth in SEQ ID NO:2.

79. (New) The method of claim 63, wherein the antibody is immunoreactive with a protein comprising twelve transmembrane domains and amino acid residues Asp 16, Glu 79 and Arg 208.

80. (New) A method of determining whether a mammalian sodium/iodide symporter is expressed in a mammalian tissue, the method comprising contacting nucleic acid from the mammalian tissue with two or more nucleic acid probes, wherein detecting hybridization of the nucleic acid probes to the nucleotide sequence indicates that the

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mammalian sodium/iodide symporter is expressed in the mammalian tissue, and wherein each nucleic acid probe comprises different or overlapping regions of nucleotides set forth in SEQ ID NO:1.

81. (New) The method of claim 80, wherein the nucleic acid from the mammalian tissue is mRNA.

82. (New) The method of claim 80, wherein the nucleic acid from the mammalian tissue is mRNA made into cDNA.

83. (New) The method of claim 80, wherein the mammalian tissue is non-thyroid tissue.

84. (New) The method of claim 80, wherein the nucleic acid probe further comprises a label.

85. (New) The method of claim 84, wherein the label is selected from the group consisting of a radioactive label, biotin, and a fluorescent probe.

86. (New) The method of claim 80, wherein the tissue is a human tissue.